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EXAMINER	
CUNNINGHAM, GREGORY F	
ART UNIT	**PAPER NUMBER**
2676	11

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/853,602	NIEMI, SAMI	
	Examiner	Art Unit	
	Greg Cunningham	2676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 March 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14,16-18 and 20-32* is/are rejected.

7)☒ Claim(s) *15 and 19* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 May 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to communications of amendment received 3/19/2004.

2. The disposition of the claims is as follows: claims 1-32 are pending in the application. Claims 1 and 20 are independent claims.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1, 4-8, 10, 20, 21, 23 and 27-32 are rejected under 35 U.S.C. 102(a) as anticipated by Martin et al., (US Patent Number 6147709 A), hereafter Martin **or, in the alternative, under 35 U.S.C. 103(a) as obvious over Battat et al., (US Patent Application Publication 2003/0033402 A1), hereafter Battat**.

A. Claim 1 is disclosed by Martin in abstract at "A method of inserting a high resolution image into a low resolution interactive image provides a greater sensation of virtual reality (presence) because increased magnification of the low resolution image, typically a wide angle image, reduces the sensation of virtual presence in the image. For example, according to the invention, as an image of the wall of an art gallery becomes magnified in a virtual presence experience, a rectangular or other planar image portion such as a painting that the user zooms on '*one preselected, zoomable area,*' is replaced with a high resolution image stored and associated

in memory '*continuously zooming (26) in on the preselected area in the presentation image*'. The virtual presence may be achieved by high resolution scanning a desired section of an image portion for overlay into the image scanned into a second memory at lower resolution. The high resolution image for insertion may be a dewarped portion of a fish-eye lens captured interactive image '*improving (30) the resolution of the zoomed-in-on, preselected area in the presentation image on the display device by means of the loaded detail image information data set when the zooming in on the preselected area in the presentation image is complete*'. Preferably, at least three reference points in the wide angle image and the planar image portion for insertion, such as the painting image, are identified and stored with the image data and a selected or predetermined magnification level. In this manner, the three image points can be manipulated and matched from the high resolution image to the perspective of the wide angle image. Also, for identity of perspective, the wide angle and high resolution images may be captured from the identical camera location. As the user inputs viewing angle criteria, such as pan and tilt angles, the rectangular image may be manipulated to match. The camera may be digital or analog, video, movie or still. Also, a high resolution photographic image may be inserted into a graphic image or vice versa."

and in col. 2, lns. 12-23 at "The high resolution image is continuously inserted over the interactive lower resolution interactive image and enhances a portion of the interactive image as a level of magnification is increased. Thus, at first, the high resolution image replaces the lower resolution interactive image when a level of magnification of the interactive image is exceeded and continues to replace the lower resolution image as magnification increases. Moreover, the

rectangular image may be made to "travel" through the interactive image in an interactive composite image, for example, by further increase in magnification or zoom, or by selection of different viewing angles such as pan, tilt and rotation."

and in col. 3, lns. 58-67 at "Once the high resolution image is matched and inserted into the interactive image, the user of the present system will be able to view the high resolution image(s) as a substitute for the lower image resolution interactive image portion overlaid. Also, as the viewer selects new pan and tilt angles, the high resolution image moves with the interactive image as a composite whole. If the viewer continues to magnify the high resolution image portion, the high resolution image pixels will provide the increased resolution the viewer requests."

and in col. 4, ln. 63 – col. 5, ln. 6 at "In accordance with U.S. Pat. 5,185,667, the low resolution input file, for example, a wide angle or fisheye lens captured file is stored at a local computer processor to its user. The computer processor may be the user's personal computer processor and the file digitally downloaded to the processor from a remote processor over the Internet, over telephone data lines or other media, for example, as taught by U.S. Pat. No. 5,384,588. In advance of transmission, the digital files may be compressed using a known standard, for example, MPEG2 or H.263."

Alternatively, Battat further makes obvious continuous zooming while displaying higher detail in [para. 0032, 0216, 0221, 0226-0227, 0242 and 0251-0253].

Particularly in para. [0221], [The system combines the capabilities of two types of user interfaces, graph diagrams and continuous zooming, in a unique way. At the highest level, the elements of a system is represented as a graph diagram, with icons interconnected with lines.

The user can **seamlessly zoom** into the diagram, and pan the diagram in any direction to make visible any part of the very large virtual space. **As the user zooms** in to the diagram, and the icons get larger, the icons are automatically replaced with their internal structure. FIG. 20 provides a illustrative screen display employing the graphical zooming and display techniques of the system." Wherein [as the user zooms in to the diagram, and the icons get larger, the icons are automatically replaced with their internal structure] corresponds to "during the step of continuous zooming, downloading a detail image information data set from the storage unit, wherein said detail image information data set is used for presenting the preselected area in higher resolution than in the presentation image".

[0226] In one implementation of the dynamic high-speed zooming feature, data for certain display elements, such as icons, may be stored in a database for association with specific data to be visually represented. In such an embodiment, the display element data may be **retrieved from a local system or database or from a remote system or database, such as a remote server**.

[0227] In such an embodiment, it is preferable if the data retrieval and graphic zooming operations may be executed asynchronously. In cases where the display data is retrieved from a remote system, this operational autonomy enables a workstation to seemlessly execute the zooming operation even if the data retrieval process is slow. For example, if a workstation has requested display data which has failed to arrive in a timely manner, the zooming operation may proceed without the display data, and present the display data whenever it arrives. This may be true even if the display data arrives during the zooming process.] Wherein [retrieved and retrieval] correspond to "downloading".

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply high resolution image into a low resolution image disclosed by Martin in combination with seamless continuous zooming while retrieving (downloading) more information as disclosed by Battat, and motivated to combine the teachings because when "a distant object is rendered with the simplest model; as the user navigates closer, the system automatically substitutes increasingly complex and realistic models as resolution warrants." as revealed by Battat in [para. 0157].

B. Claim 4, 'The method according to claim 1, wherein the detail image information data set comprises a detail image representing the preselected area in higher resolution than the presentation image.' is disclosed supra for claim 1, particularly by Martin at "For example, according to the invention, as an image of the wall of an art gallery becomes magnified in a virtual presence experience, a rectangular or other planar image portion such as a painting that the user zooms on is replaced with a high resolution image stored and associated in memory."

C. Claim 5, *'The method according to claim 4, wherein the step of improving the resolution comprises the step of replacing the zoomed-in-on, preselected area in the presentation image on the display device with the detail image when the zooming in on the preselected area in the presentation image is complete.* ' is disclosed supra for claim 4, particularly by Martin at "a rectangular or other planar image portion such as a painting that the user zooms on is replaced with a high resolution image stored and associated in memory."

D. Claim 6, *'The method according to claim 3 or 5, further comprising the step of zooming out from a detail image that is being presented on the display device, said step of zooming out comprising the steps of: replacing the detail image on the display device by the corresponding*

completely zoomed-in-on, preselected area in the presentation image, subsequently continuously zooming out from the corresponding area of the presentation image until the entire presentation image is presented.' is disclosed by Martin supra for claim 5 and in col. 5, lns. 54-60 at "(14) Now, when the user demagnifies or returns to an original position, the process may be remembered, modified and/or restored. Alternatively, the high resolution image may have an associated data file providing the address in memory of the associated interactive file so that at the selected angle of magnification, the associated interactive file border can be restored to the high resolution image."

E. Claim 7, *'The method according to claim 1, wherein the presentation image is being presented in a window on the display device and wherein the continuous zooming is performed in the same window, whereby the preselected area is expanded/reduced over the presentation image so that the preselected area gradually covers a greater/smaller part of the presentation image.'* is disclosed by Martin in col. 5, lns. 35-53 at "(12) The high resolution image 3 or a portion thereof as required is inserted into the perspective corrected lower resolution image 2 and as the image is further magnified, most of the low resolution image becomes replaced by the higher image resolution '*the preselected area gradually covers a greater/smaller part of the presentation image.'* painting 3 in image sequence. Referring to FIG. 3a, the wall image 300 is becoming increasingly magnified as the user zooms in on picture 301. FIG. 3a may represent that degree of magnification when the perspective corrected image portion 300 is to be overlaid with high resolution image 301. Three or more points in the image portion 301 are matched with corresponding points in the perspective corrected image 300 by comparing their pixel values and

adjacent pixel values. Corner values or values that show high degrees of differentiation from adjacent pixels are preferred for a more perfect match.

(13) Referring to FIG. 3b, the painting image portion 302 can be magnified beyond the degree of magnification selected for image overlay and insertion. While image portion 303 may be blurred from increasing magnification of the surrounding wall, the painting 302 is sharp and focused."

F. Claim 8, *'The method according to claim 1, wherein the presentation image is being presented in a window on the display device and wherein the continuous zooming is performed in the same window so that a gradually smaller/greater part of the presentation image is shown in the window during the continuous zooming.'* is disclosed by Martin in col. 5, lns. 35-53 at "(12) The high resolution image 3 or a portion thereof as required is inserted into the perspective corrected lower resolution image 2 and as the image is further magnified, most of the low resolution image becomes replaced by the higher image resolution '*gradually smaller/greater part of the presentation image is shown in the window during the continuous zooming.*' painting 3 in image sequence. Referring to FIG. 3a, the wall image 300 is becoming increasingly magnified as the user zooms in on picture 301. FIG. 3a may represent that degree of magnification when the perspective corrected image portion 300 is to be overlaid with high resolution image 301. Three or more points in the image portion 301 are matched with corresponding points in the perspective corrected image 300 by comparing their pixel values and adjacent pixel values. Corner values or values that show high degrees of differentiation from adjacent pixels are preferred for a more perfect match.

(13) Referring to FIG. 3b, the painting image portion 302 can be magnified beyond the degree of magnification selected for image overlay and insertion. While image portion 303 may be blurred from increasing magnification of the surrounding wall, the painting 302 is sharp and focused."

G. Claim 10, *"The method according to claim 1, wherein the boundaries of the preselected, zoomable areas in the presentation image are indicated in the presentation image to highlight the preselected, zoomable areas."* is disclosed by Martin supra for claim 7, particularly at "Referring to FIG. 3a, the wall image 300 is becoming increasingly magnified as the user zooms in on picture 301. FIG. 3a may represent that degree of magnification when the perspective corrected image portion 300 is to be overlaid with high resolution image 301. Three or more points in the image portion 301 are matched with corresponding points in the perspective corrected image 300 by comparing their pixel values and adjacent pixel values. Corner values or values that show high degrees of differentiation from adjacent pixels are preferred for a more perfect match."

H. Claim 20, "A method for generating an image for electronic presentation, comprising the steps of:

determining a main image that the presentation is to be based on [Martin, col. 3, lns. 12-17; wherein {a typically lower resolution image} corresponds to "main image"],

generating a presentation image from ... compressing ... in the main image [Martin, col. 5, lns. 4-6],

selecting areas in ... the presentation image [col. 5, lns. 12-48],

generating detail image ... in the presentation image [Martin, col. 2, lns. 24-47; col. 5, lns. 61-67], and

associating the detail image ... of the presentation image [Martin, col. 4, ln. 51 – col. 5, ln. 4; wherein {high resolution} corresponds to "detail image information data sets" and {painting 3} corresponds to "corresponding areas"]" is disclosed supra [as detailed]. However, Martin does not appear to disclose "download of one detail ... simultaneously with a continuous zooming", but Battat makes obvious continuous zooming while displaying higher detail in [para. 0032, 0216, 0221, 0226-0227, 0242 and 0251-0253].

Particularly in para. [0221], [The system combines the capabilities of two types of user interfaces, graph diagrams and continuous zooming, in a unique way. At the highest level, the elements of a system is represented as a graph diagram, with icons interconnected with lines. The user can **seamlessly zoom** into the diagram, and pan the diagram in any direction to make visible any part of the very large virtual space. **As the user zooms** in to the diagram, and the icons get larger, the icons are automatically replaced with their internal structure. FIG. 20 provides a illustrative screen display employing the graphical zooming and display techniques of the system." Wherein [as the user zooms in to the diagram, and the icons get larger, the icons are automatically replaced with their internal structure] corresponds to "during the step of continuous zooming, downloading a detail image information data set from the storage unit, wherein said detail image information data set is used for presenting the preselected area in higher resolution than in the presentation image".

[0226] In one implementation of the dynamic high-speed zooming feature, data for certain display elements, such as icons, may be stored in a database for association with specific data to

be visually represented. In such an embodiment, the display element data may be **retrieved from a local system or database or from a remote system or database, such as a remote server**.

[0227] In such an embodiment, it is preferable if the data retrieval and graphic zooming operations may be executed asynchronously. In cases where the display data is retrieved from a remote system, this operational autonomy enables a workstation to seemlessly execute the zooming operation even if the data retrieval process is slow. For example, if a workstation has requested display data which has failed to arrive in a timely manner, the zooming operation may proceed without the display data, and present the display data whenever it arrives. This may be true even if the display data arrives during the zooming process.] Wherein [retrieved and retrieval] correspond to "downloading".

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply high resolution image into a low resolution image disclosed by Martin in combination with seamless continuous zooming while retrieving (downloading) more information as disclosed by Battat, and motivated to combine the teachings because when "a distant object is rendered with the simplest model; as the user navigates closer, the system automatically substitutes increasingly complex and realistic models as resolution warrants." as revealed by Battat in [para. 0157].

I. Per dependent claim 21, this is directed to a method for provide the method of dependent claim 4, and therefore is rejected to dependent claim 4 and independent claim 20, and in col. 5, lns. 5-6 at "In advance of transmission, the digital files may be compressed using a known standard, for example, MPEG2 or H.263."

J. Per dependent claim 23, this is directed to a method for provide the method of dependent claim 4, and therefore is rejected to dependent claim 4 and dependent claim 21, and in col. 2, lns. 3-8 at "(10) A method of inserting a high resolution image into an interactive lower resolution image comprises the steps of storing the typically lower resolution interactive image, storing the high resolution image to be inserted, receiving selection signals related to insertion and positioning of the high resolution image in the interactive image, and outputting a composite image."

K. Per dependent claims 27, 28, 29 and 30, this is directed to a method for provide the method of dependent claims 8, 5, 14, and 15, respectively, and therefore are rejected to dependent claims 8, 5, 14, and 15 and independent claim 21, and in col. 5, lns. 5-6 at "In advance of transmission, the digital files may be compressed using a known standard, for example, MPEG2 or H.263."

L. Per dependent claim 31 and 32, these are directed to a method for provide the method of dependent claim 4, and therefore are rejected to dependent claim 4 and independent claim 21, and in col. 1, lns. 46-54 at "(7) Generally, these technologies involve interactive computer photography based upon digital input to the computer processor of photographic images obtained using standard, wide angle or fisheye lenses or mirrors to reflect a wide angle image into a standard lens. After initial processing of the digitized images to join them together, the technologies further permit the user to interactively select viewing angles for viewing the digitized and processed image and magnification (or zoom) values to view selected portions in detail."

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 2, 3, 6, 9, 11, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al., (US Patent Number 6,147,709) or alternative Martin and Battat et al. (US Patent Application Publication 2003/0033402 A1) as applied to claims 1 and 21 above, and further in view of Sivan et al., (US Patent Number 6,281,874B1), hereafter Sivan.

A. Claim 2 is disclosed by Martin and Battat supra for claim 1. However Martin and Battat do not appear to disclose *'wherein the detail image information data set comprises a difference image, said difference image representing the difference between the zoomed-in-on, preselected area in the presentation image and a detail image representing the zoomed-in-on, preselected area in higher resolution.'*, but Sivan does in col. 8, lns. 3-13 at "(22) The speed of downloading data can be further enhanced by performing the same pseudo-zooming of the image at the server as was previously performed by the client as explained above. The server extracts the corresponding high-resolution image data, compares with the pseudo-zoomed low-resolution image data received from the client and sends to the client only a compressed difference image. The high-resolution zoomed image is now re-constructed at the client. This allows a smaller volume of data to be downloaded to the client than would be necessary if all of the selected portion of the high-resolution image were downloaded."

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply zooming disclosed by Martin in combination with difference image zooming disclosed by Sivan, and motivated to combine the teachings because it would further enhanced the speed of downloading data as revealed by Sivan in col. 8, line 14.

B. Claim 3, *'The method according to claim 2, wherein the step of improving the resolution comprises the steps of adding the difference image to the zoomed-in-on, preselected area in the presentation image to generate a detail image of the zoomed-in-on, preselected area in higher resolution and replacing the zoomed-in-on, preselected area in the presentation image on the display device by the detail image.'* is inherently disclosed by Martin and Sivan supra for claim 2.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply zooming disclosed by Martin in combination with difference image zooming disclosed by Sivan, and motivated to combine the teachings because it would further enhanced the speed of downloading data as revealed by Sivan in col. 8, line 14.

C. Claim 6, *'The method according to claim 3 or 5, further comprising the step of zooming out from a detail image that is being presented on the display device, said step of zooming out comprising the steps of: replacing the detail image on the display device by the corresponding completely zoomed-in-on, preselected area in the presentation image, subsequently continuously zooming out from the corresponding area of the presentation image until the entire presentation image is presented.'* is disclosed supra for claim 3 and by Martin in col. 5, lns. 54-60 at "(14) Now, when the user demagnifies or returns to an original position, the process may be remembered, modified and/or restored. Alternatively, the high resolution image may have an

associated data file providing the address in memory of the associated interactive file so that at the selected angle of magnification, the associated interactive file border can be restored to the high resolution image."

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply demagnifying disclosed by Martin in combination with difference image zooming disclosed by Sivan, and motivated to combine the teachings because it would further enhanced the speed of downloading data as revealed by Sivan in col. 8, line 14.

D. Claim 9, *"The method according to claim 7 or 8, wherein the detail image fills the window when replacing the zoomed-in-on, preselected area in the presentation image."* is disclosed by Martin supra for claims 7 or 8. However Martin does not disclose "*wherein the detail image fills the window when replacing the zoomed-in-on, preselected area in the presentation image.*", but Sivan does in col. 4, ln. 66 – col. 5, ln. 8 at "(4) Having uploaded the size data from the client to the server, the selected portion of the high-resolution graphic image file is extracted from the Web server and downloaded to the client. Thus, in the above example, the 200,000 pixels in the high-resolution image file corresponding to the 12,500 pixels in the selected portion are downloaded to the client where they are displayed on the display device. Since the display device is assumed to possess only 200,000 pixels, in this case the zoomed image completely fills the display device."

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply zooming disclosed by Martin in combination with completely filling the display device disclosed by Sivan, and motivated to combine the teachings because it is assumed to bear a fixed predetermined relationship with that of the reference image: equal to

the maximum zoom ratio as revealed by Sivan in col. 5, lns. 9-11.

E. Claim 11, *'The method according to claim 3 or 4, wherein a detail image comprises preselected, zoomable areas and zooming in on one of these preselected areas is performed in the same manner as for the presentation image.'* is disclosed supra for claim 3.

F. Per dependent claim 22, this is directed to a method for provide the method of dependent claim 2, and therefore is rejected to dependent claim 2 and dependent claim 21, and in col. 5, lns. 5-6 at "In advance of transmission, the digital files may be compressed using a known standard, for example, MPEG2 or H.263."

G. Per dependent claim 24, this is directed to a method for provide the method of dependent claim 9, and therefore is rejected to dependent claim 9 and dependent claim 21.

7. Claims 12-14, 16-18 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin and Sivan as applied to claim 3 above, and further in view of Battat et al., (US Patent Application Publication 2003/0033402 A1), hereafter Battat.

A. Claim 12, *'The method according to claim 3, wherein meta data is associated with at least one of the presentation image and the detail images.'* is disclose supra for claim 3. However Martin and Sivan do not appear to disclose '*wherein meta data is associated with at least one of the presentation image and the detail images.*', but Battat does in [para. 0303] at "The system provides objects, sets of objects, associations (relationships or links) between the objects or sets of objects, and self-documenting data (e.g. metadata) so that data from relational infrastructures can be visualized. As an example, a tuple, such as a single row in a relational database, can be viewed as a degenerate object, and that a row set, such as a set of rows in a

relational database, can be viewed as a set of degenerate objects. Thus, data from relational infrastructures can be visualized."

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply zooming disclosed by Martin in combination with metadata disclosed by Battat, and motivated to combine the teachings because it "allows the visualization framework to dynamically construct property sheets and tables, the architecture is based on the data providers delivering visualization specifications in the form of hints added to the general metadata." as revealed by Battat in [para. 0312].

B. Claim 13, *'The method according to claim 4, wherein meta data is associated with at least one of the presentation image and the detail images.'* is disclose supra for claim 4. However Martin does not appear to disclose *'wherein meta data is associated with at least one of the presentation image and the detail images.'*, but Battat does in [para. 0251] at "While certain placement techniques have been implemented in the past, applicants' system is the first system to combine this technique of physical placement on a background map with the continuous zoom and pan capability. This makes the use of such placement considerably more useful, since it permits the detailed placement and yet retains the larger perspective of where the whole container is. This is useful both when the maps on two different levels of the diagram are based on a similar map and when they are different, such as a building's floor plan contained within a logical network diagram without physical representation."

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply zooming disclosed by Martin in combination with metadata

disclosed by Battat, and motivated to combine the teachings because it would make the placement conservable more useful as revealed by Battat.

C. Claim 16, "The method according to claim 12 or 13, wherein the meta data associated with an image is shown when the image is presented on the display device" is disclosed supra for claims 12 or 13.

(Examiner's note: suggest applicant elaborate how meta data is employed, since mere pixel data is meta data sufficient.)

D. Claim 17, "The method according to claim 12 or 13, wherein the meta data associated with a detail image is shown when a marker on the display device is in a corresponding area of the presentation image" is disclosed supra for claims 12 or 13.

(Examiner's note: suggest applicant elaborate how meta data is employed, since mere pixel data is meta data sufficient.)

E. Claim 18, "The method according to claim 1, wherein the preselected areas are arbitrarily orientated in the presentation image." is disclosed by Martin supra for claim 1. However Martin does not disclose, "wherein the preselected areas are arbitrarily orientated in the presentation image", but Battat does in [para. 0134-0135] at "The 3D Icon tab illustrated in FIG. 10G provides for specifying the 3-D model for the object, to be used in the 3-D visualization system. The model currently selected may be previewed in the window on the left at FIG. 10G. The control panel on the bottom of FIG. 10G allows for adjusting the view or the orientation of the object. The system also allows the user to select each of the various models used in the adaptive display ("level-Of-Detail" and "Open-in-place").

[0135] The Selecting New Object view illustrated in FIG. 10H allows the user to create a new object from simple geometric shapes. This model may then be adjusted in size, shape and orientation, and decorated with colors and texture coverings."

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply zooming disclosed by Martin in combination with orientation disclosed by Battat, and motivated to combine the teachings because it would allow selected model to be previewed and adjusted for next orientation as revealed by Battat.

F. Claim 14, "14. The method according to claim 12 or 13, wherein the meta data comprises search criteria to enable a user to search for a specific detail image." is disclosed supra for claims 12 or 13 and by Martin in col. 5, lns. 16-18 at "To do so, an associated data file with the interactive image file provides the address in memory for any associated high resolution image(s) or image portion to be inserted." and col. 5, lns. 57-60 at "Alternatively, the high resolution image may have an associated data file providing the address in memory of the associated interactive file so that at the selected angle of magnification, the associated interactive file border can be restored to the high resolution image."

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply zooming and orientation disclosed by Martin in combination with associated data file disclosed by Martin, and motivated to combine the teachings because it would obviously provide the information source.

G. Per dependent claim 25, these are directed to a method for provide the method of dependent claim 18 and therefore are rejected to dependent claim 18 and independent claim 20.

8. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Martin, Sivan and Battat as applied to claim 25 above, further in view of McCrossin et al., (US Patent 6,600,840 B1), hereafter McCrossin.

A. Per dependent claim 26, "The method according to claim 25, further comprising the step of rotating the detail images so that they are oriented in the same way as the presentation image" is disclosed supra for claim 25. However Martin, Sivan and Battat do not appear to disclose "further comprising the step of rotating the detail images so that they are oriented in the same way as the presentation image", but McCrossin does in col. 9, lns. 5-14 at "This process is performed when image request vector 127 is compared to actual image vector 139, as depicted in FIG. 6. A determination of whether the image is compressed is made, as illustrated in block 151. If the image is compressed, a decompress filter is installed, as depicted in block 153. Thereafter, a determination of whether the wanted orientation is equal to the current orientation, as illustrated in block 155. If the answer is no a rotate filter is installed, as depicted in block 157."

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply zooming and orientation disclosed by Martin in combination with orientation comparisons and rotating to same orientation disclosed by McCrossin, and motivated to combine the teachings because it would provide an improved data processing system as disclosed by McCrossin in col. 1, lns. 60-61.

Allowable Subject Matter

9. Claims 15 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. Applicant's arguments filed 3/19/2004 have been fully considered but they are not persuasive.

A. Martin discloses claim 1 as detailed supra, wherein [The high resolution image is continuously inserted over the interactive lower resolution interactive image and enhances a portion of the interactive image as a level of magnification is increased. Thus, at first, the high resolution image replaces the lower resolution interactive image when a level of magnification of the interactive image is exceeded and continues to replace the lower resolution image as magnification increases. Moreover, the rectangular image may be made to "travel" through the interactive image in an interactive composite image, for example, by further increase in magnification or zoom, or by selection of different viewing angles such as pan, tilt and rotation.– col. 2, lns. 12-23] and [If the viewer continues to magnify the high resolution image portion, the high resolution image pixels will provide the increased resolution the viewer requests. – col. 3, lns. 65-67] corresponds to "continuously zooming in on the preselected area in the present image, during the step of continuous zooming, loading (28) a detail image information data set to the display device from the storage unit, wherein said detail image information data set is used for presenting the preselected area in higher resolution than in the presentation image, and

improving (30) the resolution of the zoomed-in-on, preselected area in the presentation image on the display device by means of the loaded detail image information data set when the zooming in on the preselected area in the presentation image is complete."

Thus, even at some point the zooming will cease as acknowledged in applicant's specification page 3, lns. 31-35 at "The continuous zooming is performed in the presentation image and when the zooming is completed the resolution of the zoomed-in-on, preselected area is improved by means of the loaded detail image information data set."

In the alternative, 103(a) rejection, Battat discloses in para. 0032, 0216, 0221, 0226-0227, 0242 and 0251-0253].

Particularly in para. [0221], [The system combines the capabilities of two types of user interfaces, graph diagrams and continuous zooming, in a unique way. At the highest level, the elements of a system is represented as a graph diagram, with icons interconnected with lines. The user can **seamlessly zoom** into the diagram, and pan the diagram in any direction to make visible any part of the very large virtual space. **As the user zooms** in to the diagram, and the icons get larger, the icons are automatically replaced with their internal structure. FIG. 20 provides a illustrative screen display employing the graphical zooming and display techniques of the system." Wherein [as the user zooms in to the diagram, and the icons get larger, the icons are automatically replaced with their internal structure] corresponds to "during the step of continuous zooming, downloading a detail image information data set from the storage unit, wherein said detail image information data set is used for presenting the preselected area in higher resolution than in the presentation image".

[0226] In one implementation of the dynamic high-speed zooming feature, data for certain display elements, such as icons, may be stored in a database for association with specific data to be visually represented. In such an embodiment, the display element data may be **retrieved from a local system or database or from a remote system or database, such as a remote server**.

[0227] In such an embodiment, it is preferable if the data retrieval and graphic zooming operations may be executed asynchronously. In cases where the display data is retrieved from a remote system, this operational autonomy enables a workstation to seemlessly execute the zooming operation even if the data retrieval process is slow. For example, if a workstation has requested display data which has failed to arrive in a timely manner, the zooming operation may proceed without the display data, and present the display data whenever it arrives. This may be true even if the display data arrives during the zooming process.] Wherein [retrieved and retrieval] correspond to "downloading".

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply high resolution image into a low resolution image disclosed by Martin in combination with seamless continuous zooming while retrieving (downloading) more information as disclosed by Battat, and motivated to combine the teachings because when "a distant object is rendered with the simplest model; as the user navigates closer, the system automatically substitutes increasingly complex and realistic models as resolution warrants." as revealed by Battat in [para. 0157].

B. Independent claim 20 has been rejected as shown in detail, supra, without reference to independent claim 1. Claim 20 is rejected, in the alternative, under 35 U.S.C. 103(a) as obvious over the combination of Martin with Battat as exemplified supra.

C. Since the combination of Martin and Battat does disclose retrieving "downloading" as the user continuously zooms in to the diagram as detailed, supra for independent claims 1 and 20, claims 2-14, 16-18 and 21-32 stand upon the base rejection of said independent claims 1 and 20 and claims 2-14, 16-18 and 21-32 are further rejected as detailed supra.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Responses

12. Responses to this action should be mailed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231. If applicant desires to fax a response, (703) 872-9314 may be used for formal communications.

Please label "PROPOSED" or "DRAFT" for informal facsimile communications. Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

When making claim amendments, the applicant is encouraged to consider the references in their entireties, including those portions that have not been cited by the examiner and their equivalents as they may most broadly and appropriately apply to any particular anticipated claim amendments.

Inquiries

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greg Cunningham whose telephone number is (703) 308-6109.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella, can be reached on (703) 308-6829.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

G.F. Cunningham

gfc

May 27, 2004

Kee M. Tung
Primary Examiner